

03-11-03

14:45 FROM-RatnerPrestia
Appin. No. 09/18,225
Amdt. dated March 11, 2003
Reply to Office Action of January 6, 2003

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SAR 13632

REMARKS

The pending claims are 1-30. Claims 1, 15, 17 and 18 has been amended. No new matter is introduced therein.

Claim 1 has been amended to delete an extraneous line. In addition, claim 15 has been amended to correct a spelling error and claim 18 has been amended to change "second electrode" to "second electrode layer" to ensure that the term has adequate antecedent basis.

The Office Action objects to claims 17 and 18 for failing to state the relationship of the two electrode layers and how the two electrode layers cooperate with each other. This ground for objection is overcome by the amendments to claims 17 and 18. Both claims have been amended to recite that the high-conductivity material is "one of adjacent to and on top of the transparent electrode material." Basis for this amendment may be found in the specification in paragraphs 107 and 108. Paragraph 107 describes an embodiment in which the first and second electrode layers are formed on the same level and are connected perpendicular to the substrate. Paragraph 108 describes an embodiment in which the second electrode is formed as a thin stripe down the center of the transparent electrode and, thus, on top of the transparent electrode. In this embodiment, the connection between the first and second electrodes is parallel to the substrate. Because claims 17 and 18 have been amended to recite the relationship between the first and second layers, claims 17 and 18 are no longer subject to rejection.

The Office Action states that claims 17-30 would be allowable if the §112 rejections were overcome. As shown above, these objections have been overcome. Therefore, claims 17-30 are not subject to objection.

Claims 1-4, 6-7, 9 and 13-16 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Leupp et al. (U.S. Patent No. 3,863,332) for the reasons stated in the previous Office Action. In addition, the present Office Action contends that applicant has relied upon certain features which the Office Action contends are not recited in the claims. After apparently refusing to consider the

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allegedly non-recited features, the Office Action then contends that the remaining features are found in Leupp. Applicant respectfully disagrees.

On pages 2-3, the Office Action contends that the following recitation is not found in claim 1:

a second layer of the at least one electrode formed in contact with the first electrode layer.

Applicant agrees that the precise language stated by the Office Action is not found in claim 1. However, it is important to note that applicant's previous response, and the present response, does not rely on such language in claim 1. Instead, page 5 of the previous response quoted lines 6-8 of claim 1 as follows:

forming a second layer of the at least one electrode on a portion of the first layer of the at least one electrode substantially surrounding the precise pattern of the at least one island. (Emphasis added.)

) not in contact

The Office Action contends that the actual recitation in claim 1 is disclosed by Leupp's spacer 33 formed on a portion of electrode layer 19 as shown in Figure 10 of Leupp. Applicant respectfully disagrees. First, claim 1 recites a "method of depositing at least one island of a liquid electronic material in a precise pattern on at least one electrode on a surface." In contrast, Leupp discloses "a method for fabricating the backplate for [liquid crystal] displays having thereon spacers to maintain the thickness of the liquid crystal display uniform throughout." (col. 1, lines 6-9). This recitation in claim 1 shows that applicant is claiming a device that is substantially different from the Leupp device.

Second, claim 1 recites "forming a first layer of the at least one electrode" and "forming a second layer of the at least one electrode on a portion of the first layer." Ignoring most of these recited features, the Office Action contends that Leupp discloses these features with the statement that Leupp discloses "an aluminum layer (e.g., spacer 33) formed on a portion of the first electrode layer (19) as shown in figure 10." Applicant respectfully disagrees with this contention. Element 19 in Leupp is not a "first layer of the at least one electrode." Instead,

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element 19 is the entire electrode. It is not just one layer of an electrode. In addition, element 33 is not "a second layer of the at least one electrode." As the Office Action admits, element 33 is only a spacer. Spacer 33 in Figure 10 is formed from aluminum element 27 in Figures 7 and 9. (col. 4, lines 45-62). The only purpose of layer 27 (along with insulating layer 25) is to "determine the total thickness of the liquid crystal display device" in which it is incorporated. (col. 4, lines 25-28). Since spacer 33 is formed from spacer 27, spacer 33 has the same sole purpose as spacer 27. Because spacer 33 is not "a second layer of the at least one electrode" it does not meet the recitation of claim 1: "a second layer of the at least one electrode on a portion of the first layer of the at least one electrode." (emphasis added) Although spacer 33 may be characterized broadly as "a layer," it is not a layer of electrode 19. It is merely an element of a liquid crystal display that determines the thickness of the display. The spacer could not be a part of the electrode in Leupp because, if it were, it would form a short circuit between two electrodes and defeat the purpose of the Leupp device.

Third, Leupp does not disclose or suggest "forming the second layer of the at least one electrode on a portion of the first layer." Instead, Leupp discloses that the spacer 33 is formed on top of a doped oxide layer 25 which is formed on top of the electrode 19. (See col. 4, lines 8-15).

For the above reasons, Leupp does not meet the limitations of claim 1. Since the Office Action rejected claim 1 under 35 U.S.C. § 103(a), the Office Action must be taking the position that it would somehow be obvious to modify Leupp in order to meet the recitation of claim 1. However, the Office Action does not explain the basis of the § 103(a) rejection by failing to suggest how it would have been obvious to modify Leupp.

For all of the above reasons, applicant respectfully contends that claim 1 is not subject to rejection under 35 U.S.C. § 103(a) as being unpatentable over Leupp.

The Office Action contends that the following recitation is not found in claim 2:

a second layer of the at least one electrode.

Applicant agrees that the precise language stated by the Office Action is not found in claim 2. However, it is important to note that applicant's previous response, and the present response, does not rely on such language in claim 2. Instead, page 5 of the previous response quoted lines 6-7 of claim 2 as follows:

a second layer formed in contact with the first electrode layer
and substantially surrounding the at least one island of the
precise island pattern.

Then, the Office Action contends that the actual recitation in claim 2 is disclosed by Leupp's layer 25 (an alleged second layer) formed in contact with the first electrode layer 19. Applicant respectfully disagrees for the reasons related with respect to the rejection of claim 1. In addition, claim 2 recites "[a] two layer electrode structure to promote the deposition of a fluid in a precise island pattern." In contrast, Leupp discloses "a method for fabricating the backplate for [liquid crystal] displays having thereon spacers to maintain the thickness of the liquid crystal display uniform throughout." (col. 1, lines 6-9) This recitation in claim 2 shows that it is making a device that is substantially different from the Leupp device.

Furthermore, claim 2 recites: "A two layer electrode structure...comprising ... a second layer formed in contact with the first electrode layer." Ignoring the relationship among these recited features, the Office Action contends that Leupp discloses these features with the statement that Leupp discloses "a second layer (e.g., layer 25) formed in contact with the first electrode layer (19)." Applicant respectfully disagrees with this contention. Element 19 is not "a first electrode layer." Instead, element 19 is the entire electrode. It is not just one layer of an electrode. In addition, layer 25 is not "a second layer formed in contact with the first electrode layer." In order to anticipate claim 2, Leupp would have to show that layer 25 is a second layer of a two layer electrode structure." Layer 25 is not a second layer of electrode 19. Instead, layer 25 is only one part of a spacing mechanism "which ultimately determines the total thickness of the liquid crystal display device." (col. 4, lines 25-27). To emphasize that layer 25 is not a part of the electrode 19, it is noted that it is not referred to in the specification as being a part of

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the electrode. Indeed, it is described as being an insulating layer (see col. 4, lines 10-11). If it were part of the electrode, it would defeat the purpose of the device since, as shown in Fig. 13, the layer 25 bridges two electrodes and thus, would form a short circuit between the electrodes. Since layer 25 is not part of electrode 19, layer 25 does not meet the recitation of "a two layer electrode structure ... comprising ... a second layer formed in contact with the first electrode layer."

For the above reasons, Leupp does not meet all of the limitations of claim 2. Since the Office Action rejected claim 2 under 35 U.S.C. § 103(a), the Office Action must be taking the position that it would somehow be obvious to modify Leupp in order to meet the recitations of claim 2. However, the Office Action does not explain the basis of the § 103(a) rejection by failing to suggest how it would have been obvious to modify Leupp. Furthermore, as described above, it would not be obvious to modify Leupp because to do so would render Leupp's device inoperative.

For all of the above reasons, applicant respectfully contends that claim 2 is not subject to rejection under 35 U.S.C. § 103(a) as being unpatentable over Leupp.

Claims 3-4, 6-7, 9 and 13-16 all depend from independent claim 2. Since claim 2 is not subject to rejection over Leupp, these dependent claims are also not subject to rejection under 35 U.S.C. § 103(a) as being unpatentable over Leupp et al.

The prior art made of record and not relied upon is not considered any more pertinent to applicant's disclosure than that already cited.

For all the foregoing reasons, applicant respectfully solicits allowance of claims 1-4, 6-7, 9, 13-30.

Applicant appreciatively notes that the Examiner has stated that claims 5, 8, 10-12 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. These claims have not been rewritten at this time because claim 2 is allowable.

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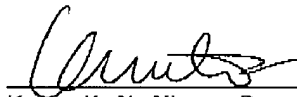
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In view of the foregoing amendments and remarks, Applicants request that the Examiner reconsider and withdraw the objections to claims 5, 8, 10-12 and 17-30 and the rejection of claims 1-4, 6, 7, 9 and 13-16.

Respectfully Submitted,



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The Assistant Commissioner for Patents is hereby authorized to charge payment to Deposit Account No. 18-0350 of any fees associated with this communication.

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March 11, 2003


Kenneth N. Nigon